

First Hit Fwd Refs



Generate Collection

Print

L55: Entry 1 of 2

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**** See image for Certificate of Correction ****TITLE: Output control apparatus and method and storage medium storing computer readable programAbstract Text (1):

A spooling method for sequentially printing a plurality of documents in which a server spools print data supplied from another information processing system on the same network. To realize this method, an output control apparatus for receiving data of a job unit input from a data source and outputting from an output unit data of the job unit in accordance with a predetermined order, includes a setting unit for setting an order of outputting data and a control unit for outputting from the output unit data of the job unit received from the data source, in accordance with the output order set by the setting unit.

Brief Summary Text (9):

In order to achieve the above object, an output control apparatus of this invention is structured in the following manner.

Brief Summary Text (10):

The output control apparatus for receiving data of each job unit input from a data source and outputting from an output unit output data of the job unit in accordance with a predetermined order, has setting means for setting an order of outputting data and control means for outputting from the output unit the output data of the job unit on the basis of the input data received from the data source, in accordance with the output order set by the setting means.

Drawing Description Text (18):

FIG. 17 shows an example of a print order managed by the print server and displayed on a display of a host computer.

Detailed Description Text (9):

As shown in FIG. 3, the print spooler operates under the control of CPU 111 in the following manner.

Detailed Description Text (35):

First, data in the print wait state is searched from the upper side (Step S81), it is checked whether the data in the print wait state is present (Step S82), and if there is no data, the queue-out process is terminated, whereas if there is data in the print wait state, the data is sent to the printer 100 (Step S83) and the queue-out process is terminated.

Detailed Description Text (38):

In the third embodiment, since sequential print data in the queue is in the temporary suspension state until all the sequential print data sets reach the spooler 114, print data from another client is sent to the printer with priority over the sequential print data. In the fourth embodiment, as shown in the flow chart of FIG. 14, the ordinary print data from another client is made in the temporary suspension state from when the first sequential print data reached to when the last sequential print data reaches, and when the last sequential print

data reaches, the ordinary print data is changed in the print wait state (Step S67). In this manner, the sequential print data of the client can be printed with priority. In this case, however, since the sequential print data sets in the print wait state supplied from a plurality of clients are present in the queue, these data sets are sent to the printer 110 in a mixed state. To avoid this, the number of clients allowed to perform the sequential print is limited to one client (Step S521).

Detailed Description Text (43):

The state of the spooler is notified to a client at a proper timing. The present print state is displayed via a driver on a display at the client, as shown in FIG. 17. Namely, the print order of each job is managed on RAM 113, and CPU 111 transmits this data representative of the print order to a requested client. The client displays the received print order data on the display, as shown in FIG. 17.

Detailed Description Text (55):

FIG. 18 is a cross sectional view showing the structure of a first output apparatus to which the invention is applicable, the first output apparatus being a laser printer (LBP).

Detailed Description Text (56):

In FIG. 18, reference numeral 1500 represents an LBP which receives and stores therein print information (character codes and the like), form information, or macro instructions, respectively supplied from an externally connected host computer, generates character patterns, form patterns, or the like in accordance with the supplied information, and forms an image on a recording medium such as a recording sheet. Reference numeral 1501 represents a console panel on which manual switches, LED displays, and the like are disposed. Reference numeral 1000 represents a printer control unit for controlling the whole of LBP 1500 and analyzing character information and the like supplied from the host computer. The printer control unit 1000 converts mainly character information into video signals of corresponding character patterns and outputs them to a laser driver 1502. The laser driver 1502 drives a semiconductor laser 1503 to turn on and off a laser beam 1504 radiated from the semiconductor laser 1503 in accordance with the input video signals. The laser beam 1504 is swung right and left by a rotary polygon mirror 1505 to scan and expose an electrostatic drum 1506 so that an electrostatic latent image of character patterns is formed on the electrostatic drum 1506. This latent image is developed by a developing unit 1507 disposed around the electrostatic drum 1506, and transferred to a recording sheet. Cut sheets are used as recording sheets and loaded in a paper cassette 1508 mounted on LBP 1500. Each cut sheet is transported into LBP 1500 and on the electrostatic drum 1506 by a paper feed roller 1509 and transport rollers 1510 and 1511. LBP 1500 has at least one card slot (not shown) to use an optional font card, a different language control card (emulation card), or the like, in addition to built-in fonts.

Detailed Description Text (57):

FIG. 19 is a perspective view showing the structure of a second output apparatus to which the invention is applicable, the first output apparatus being an ink jet recording apparatus (IJRA).

Detailed Description Text (60):

FIG. 20 is a block diagram illustrating the control of the second output apparatus shown in FIG. 19.

CLAIMS:

1. An output control apparatus which receives a print request from a client apparatus and determines a data transmission order to an output unit, said output control apparatus comprising:

reception means for receiving continuous-print information indicating a continuous print operation;

discrimination means for discriminating whether a predetermined number of print requests to be continuously printed have been received, based on the continuous-print information received by said reception means; and

determination means for determining the data transmission order such that the predetermined number of print requests may be continuously processed, if said discrimination means discriminates that the predetermined number of print requests have been received, wherein said determination means determines the data transmission order such that a print request not to be continuously printed may be first processed, if said discrimination means discriminates that the predetermined number of print requests have not been received.

2. An output control apparatus according to claim 1, wherein the predetermined number is defined by the continuous-print information.

3. An output control apparatus according to claim 1, wherein said reception means receives the continuous-print information from the client apparatus.

4. An output control apparatus according to claim 1, wherein said determination means determines the data transmission order such that print requests to be continuously printed which have been already received may be continuously processed, in response to a time-out process determined by the continuous-print information.

5. An output control apparatus according to claim 1, wherein said output control apparatus is a print server and the output unit is a printer.

6. An output control apparatus which receives a print request from a client apparatus and determines a data transmission order to an output unit, said output control apparatus comprising:

a receiver arranged to receive continuous-print information indicating a continuous print operation;

a discriminator, adapted to discriminate whether a predetermined number of print requests to be continuously printed have been received, based on the continuous-print information received by said receiver; and

a determining component, adapted to determine the data transmission order such that the predetermined number of print requests may be continuously processed, if said discriminator discriminates that the predetermined number of print requests have been received, wherein said determining component determines the data transmission order such that a print request not to be continuously printed may be first processed, if said discriminator discriminates that the predetermined number of print requests have not been received.

7. An output control apparatus according to claim 6, wherein the predetermined number is defined by the continuous-print information.

8. An output control apparatus according to claim 6, wherein said receiver receives the continuous-print information from the client apparatus.

9. An output control apparatus according to claim 6, wherein said determining component determines the data transmission order such that print requests to be continuously printed which have been already received may be continuously processed, in response to a time-out process determined by the continuous-print information.

10. An output control apparatus according to claim 6, wherein said output control apparatus is a print server and the output unit is a printer.

11. An output control method for use with an output control apparatus which receives a print request from a client apparatus and determines a data transmission order to an output unit, said output control method comprising the steps of:

receiving continuous-print information indicating a continuous print operation;

discriminating whether a predetermined number of print requests to be continuously printed have been received, based on the continuous-print information received in said receiving step; and

determining the data transmission order such that the predetermined number of print requests may be continuously processed, if it is discriminated in said discriminating step that the predetermined number of print requests have been received, wherein said determining step includes determining the data transmission order such that a print request not to be continuously printed may be first processed, if it is discriminated in said discriminating step that the predetermined number of print requests have not been received.

15. An output control method according to claim 11, wherein the output control apparatus is a print server and the output unit is a printer.

16. A memory medium storing computer-executable instructions for performing an output control method for use with an output control apparatus which receives a print request from a client apparatus and determines a data transmission order to an output unit, said output control method comprising the steps of:

receiving continuous-print information indicating a continuous print operation;

discriminating whether a predetermined number of print requests to be continuously printed have been received, based on the continuous-print information received in said receiving step; and

determining the data transmission order such that the predetermined number of print requests may be continuously processed, if it is discriminated in said discriminating step that the predetermined number of print requests have been received, wherein said determining step includes determining the data transmission order such that a print request not to be continuously printed may be first processed, if it is discriminated in said discriminating step that the predetermined number of print requests have not been received.

20. A memory medium according to claim 16, wherein the output control apparatus is a print server and the output unit is a printer.

21. A program product for performing an output control method for use with an output control apparatus which receives a print request from a client apparatus and determines a data transmission order to an output unit, said output control method comprising the steps of:

receiving continuous-print information indicating a continuous print operation;

discriminating whether a predetermined number of print requests to be continuously printed have been received, based on the continuous-print information received in said receiving step; and

determining the data transmission order such that the predetermined number of print requests may be continuously processed, if it is discriminated in said

discriminating step that the predetermined number of print requests have been received, wherein said determining step includes determining the data transmission order such that a print request not to be continuously printed may be first processed, if it is discriminated in said discriminating step that the predetermined number of print requests have not been received.

25. A program product according to claim 21, wherein the output control apparatus is a print server and the output unit is a printer.